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मानक

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IS 15494 (2004): Packaging - Tactile Warnings of Danger - Requirements [TED 24: Transport Packages]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
पैकेजिंग — खतरे के लिए स्पर्शनीय चेतावनियाँ — अपेक्षाएं

Indian Standard
**PACKAGING — TACTILE WARNINGS OF DANGER —
REQUIREMENTS**

ICS 11.180;55.020

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

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Price Group 3

NATIONAL FOREWORD

This Indian Standard which is identical with ISO 11683 : 1997 'Packaging — Tactile warnings of danger — Requirements' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Transport Packages and Packaging Codes Sectional Committee and approval of the Transport Engineering Division Council.

In the adopted standard, the warnings of danger is affixed on the packages which contain dangerous substances and preparations. This standard specifies a tactile warning which in its form is normally a raised equilateral triangle, reduced to 3 raised dots where there is not enough space on the package for the triangle.

For blind and visually handicapped persons, the tactile warning of danger is simple in its presentation, is as consistent as possible in its location, make the teaching and learning process easy and provides a guarantee of recognition.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. In the adopted standard certain terminology and conventions are, however, not identical with those used in Indian Standards. Attention is drawn especially to the following:

- a) Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'; and
- b) Comma(,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker

CROSS REFERENCE

This is an International Standard adopted under a dual number system on similar subject. The corresponding Indian Standard which is to be substituted in its place along with its degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 780 : 1997 Packaging — Pictorial marking for handling of goods	IS 1260 (Part 2) : 1999 Packaging — Pictorial marking for handling and labeling of goods: Part 2 General goods (<i>third revision</i>)	Identical

The Concerned Technical Committee has reviewed the provisions of EN 417 : 1992 'Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve for use with portable appliances — Construction, inspection, testing and marking', referred in this adopted International Standard and has decided that this is acceptable for use in conjunction with this standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 Rules for rounding off numerical values (*revised*). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

PACKAGING — TACTILE WARNINGS OF DANGER — REQUIREMENTS

1 Scope

This standard specifies the requirements for a tactile warning of danger on packagings which contain certain dangerous substances and preparations.

To prevent confusion in interpretation, the tactile warning of danger is affixed only on packages covered by the regulations in force on the dangerous substances and preparations.

This standard does not specify the dangerous substances and preparations to be contained in packagings with a tactile warning of danger. These are to be specified by legislative authorities.

2 Normative references

This standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 417	1992	Non - refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances - Construction, inspection, testing and marking.
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3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 dangerous

Description specified by legislative authorities for certain substances (see 3.1.1) and preparations (see 3.1.2).

3.1.1 substances

Chemical elements and their compounds as they occur in the natural state or as produced by industry.

3.1.2 preparations

Mixtures or solutions composed of two or more substances.

3.2 packaging

Any form of container in which substances or preparations are directly packaged.

NOTE: The term Packaging is used throughout in the restricted sense of primary packaging, excluding any secondary packaging or wrapping.

3.3 package

Packaging with its contents.

3.4 bottom

Normal standing surface of packaging.

3.5 handling surface

That part of the packaging which is touched by the user during normal use, viz, picking up and/or handling when opening and emptying the contents of the package.

3.6 edge

Zone where the upright surface(s) and the bottom meet.

4 General requirements

The tactile warning of danger shall be placed on the packaging and not on any secondary packaging, such as a cardboard box protecting a glass bottle, so that it can be felt prior to fully opening the package.

The requirements laid down in clauses 5, 6, 7 and 8 shall be fulfilled.

5 Requirements for the tactile warning

The symbols described in clauses 6 and 7 are deemed to be tactile warnings of danger.

This applies equally to warnings which are an integral part of the packaging or presented otherwise, e.g. on an adhesive label or attached to the packaging.

6 Symbol dimensions

6.1 General

The normal symbol (6.2) shall be used where physically possible. The reduced size 9 mm symbol (6.3.1) shall be used only where application of the normal symbol is not physically possible. The 3 dots symbol (6.3.2) shall be used only where application of the 9 mm symbol is not physically possible. The 3 mm symbol (6.3.3) shall be used only where application of the 3 dots symbol is not physically possible.

6.2 Normal size

The symbol shall be an equilateral triangle with corners as sharp as possible (see figure 1).

At the corners, the sides shall be joined where practicable, if not, no more than 1,0 mm apart.

The length L of the side shall be $18\text{ mm} \pm 2\text{ mm}$.

The triangle shall consist of a frame, of which the width B shall be $1,7 \text{ mm} \pm 0,2 \text{ mm}$.

The height H of the frame cross section shall be between $0,25 \text{ mm}$ and $0,5 \text{ mm}$.

The minimum area of the cross section of the frame shall be $1/2 H \times B$, and the shape of the cross section may for example be rectangular (see section AA in figure 1) or curved.

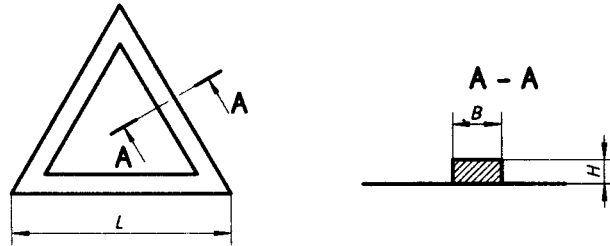


Figure 1 : Tactile symbol of warning

6.3 Reduced size

Three symbols of reduced dimensions, may be used.

6.3.1 The 9 mm symbol

The symbol shall be an equilateral triangle with corners as sharp as possible (see figure 1). This symbol may be frame or filled.

At the corners, the sides shall be joined where practicable, if not, no more than $1,0 \text{ mm}$ apart.

The length L of the side shall be $9 \text{ mm} \pm 1 \text{ mm}$.

The triangle, when frame only, shall have a width B of $1 \text{ mm} \pm 0,2 \text{ mm}$.

The height H of the frame cross-section shall be between $0,25 \text{ mm}$ and $0,5 \text{ mm}$.

The minimum area of the cross-section of the frame shall be $1/2 H \times B$, and the shape of the cross section may for example be rectangular (see section AA in figure 1) or curved.

If the triangle is filled then the height and the contour of the perimeter shall be as established for a frame.

6.3.2 The 3 dot symbol

The 3 dots - each with a truncated cone shape - shall be equally spaced on a circle (see figure 2).

The diameter of each dot shall be $2 \text{ mm} \pm 0,2 \text{ mm}$.

The height H of the section shall be between $0,25 \text{ mm}$ and $0,5 \text{ mm}$.

The distance D between any 2 dots - centre to centre - shall be equal and between 3 mm and 9 mm.

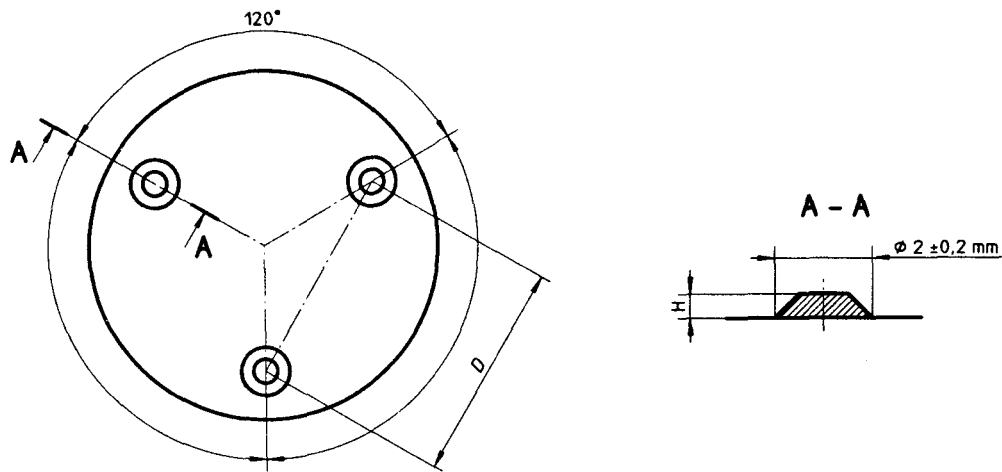


Figure 2 : 3 dot symbol for tactile warning of danger

6.3.3 The 3 mm symbol

The triangle shall be an equilateral triangle with corners as sharp as possible (see figure 1). This symbol shall be filled.

The length L of the side shall be $\left(3^{+1}_0\right)$ mm (not less than 3 mm and not more than 4 mm).

The height H of the frame cross section shall be between 0,25 mm and 0,5 mm.

7 Location of the tactile warning of danger

7.1 General requirements

The tactile warning of danger shall be located in such a way that any other embossed patterns do not cause confusion.

7.2 Packaging with bottom

7.2.1 General case

Each entire symbol for tactile warning of danger shall be located on the upright handling surface near the edge within the range indicated in figure 3, such that the top of the triangle is not more than 50 mm from the bottom of the packaging.

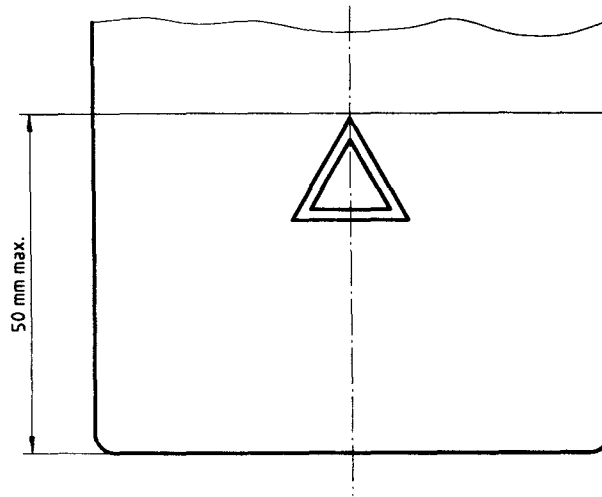


Figure 3 : Location of the tactile warning of danger on packaging with bottom

7.2.2 Specific cases

7.2.2.1 General

For the following packaging, the tactile warning of danger shall be located as specified below unless this is technically impossible. Otherwise the general requirements as in 7.2.1 shall apply.

7.2.2.2 Packaging of aerosols

The tactile warning of danger shall be located on that surface of the packaging of aerosols where the finger is placed to actuate the aerosol. This surface (the actuator button or spray through overcap) shall be an integral part of the aerosol packaging and not one which is removed during the normal use of the product.

7.2.2.3 Containers for combustible gas

For gas containers of which the content can be used only while specific connections or fittings are attached, the tangible characteristics of these connections or fittings shall be considered to be a tactile warning of danger.

For hermetically sealed gas containers of which the shape of the top complies with the provisions of EN 417, the tangible characteristics of the shape shall be considered to be a tactile warning of danger.

7.2.2.4 Plastic packaging with a full opening (injection process)

The tactile warning shall be located on the handling surface as near as possible to the opening.

7.3 Packaging without bottom

For tubes and cartridges, the tactile warning shall be located on the shoulder, evenly spaced around the tube nozzle, in the following manner :

Dots and triangles are spaced on a concentric circle around the tube nozzle ; they are regularly positioned (an area with a triangle to be followed by an area which is smooth), each triangle shall point towards the outside of the tube (see example in figure 4).

For other packaging without bottom, the tactile warning shall be located on the handling surface at the discretion of the manufacturer.

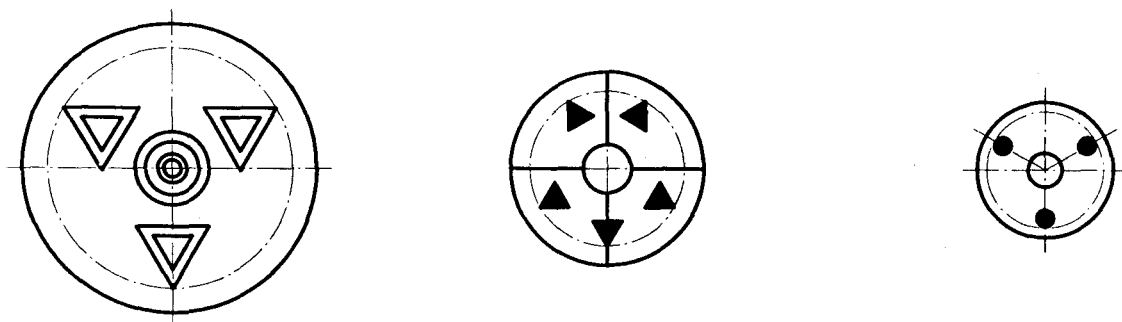


Figure 4 : Example of position of the tactile warning of danger on tubes and cartridges

7.4 Small packaging

The tactile warning (s) shall be located on the handling surface at the discretion of the manufacturer.

8 Durability of the tactile symbol

The warning shall remain tactile during the expected period of use of the package under normal handling conditions.

Bureau of Indian Standards

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

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Amendments Issued Since Publication

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